

**Key Concepts and Description
of New Source Review Reform of 2002**

Prepared by:
**Subcommittee on NSR Reform
State Advisory Board on Air Pollution**

**Prepared for Submission to the Virginia
State Air Pollution Control Board**

October 14, 2003

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The subcommittee on NSR Reform benefited from the lively discussions and feedback offered by the full membership of the State Advisory Board during our regularly scheduled meetings. Many comments and recommendations received by this subcommittee were incorporated into the final report.

NSR REFORM SUBCOMMITTEE REPORT

Project Title: Key Concepts and Description of New Source Review (NSR) Reform of 2002

The NSR process has long been considered a difficult and expensive process. There have been serious discussions about revising the NSR process for over a decade. The slow process of reforming NSR rules reflects both its inherent complexity and the strongly held views for and against making changes to it. EPA intends to adopt further changes but is now defending the changes it has made in the courts.

Public participation is an important component of the NSR process. The NSR Reform Subcommittee was asked to prepare a document that describes the concepts contained in the NSR Reform.

Mission Statement: To prepare an informational guide for NSR Reform that describes the key concepts in a clear manner so that members of the interested public, regulated facilities and regulatory staff have an overview of the application of NSR to a specific project.

Work Plan: We focused our efforts on preparing an informational guide that will be useful to the public in gaining an understanding of the NSR Reform of 2002. The key concepts we included are:

- Baseline Actual Emissions
- Actual-to-Projected-Actual Applicability Test
- Plantwide Applicability Limitations (PALS)
- Clean Unit Test
- Pollution Control Project (PCP) Exclusion

We relied primarily on the detailed preamble and the EPA regulations published in the Federal Register on December 31, 2002.

The NSR Reform subcommittee prepared three documents. The main document, “Key Concepts and Description of NSR Reform of 2002,” is included as Attachment 1 of this report. In the process of preparing the main document, two other working documents were prepared containing considerably more detailed description on “Clean Units” (Attachment 2) and “Plantwide Applicability Limits” (Attachment 3).

Conclusions: The major NSR process is intended to be a public process. It is also a complex process containing many difficult concepts and complicated technical analyses. We attempted to prepare a document explaining the recent changes to the NSR process (NSR Reform) in terms that the interested public can more easily comprehend.

Recommendations:

1. We recommend that the DEQ make the document entitled “Key Concepts and Description of NSR Reform of 2002” available to the public. We suggest that it be included on the DEQ’s official website and that paper copies be made available upon request.
2. We recommend that the DEQ use the two detailed documents on “Clean Units” and “Plantwide Applicability Limits” internally in preparation of its staff for adopting NSR Reform.
3. We recommend that the DEQ invite members of the State Advisory Board Subcommittee on NSR Reform to serve on a Technical Advisory Committee to study the implementation of NSR Reform in Virginia.

Attachment 1

Key Concepts and Description of New Source Review Reform of 2002

Prepared by:

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State Advisory Board on Air Pollution**

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SECTION 1. INTRODUCTION

This document is intended to give a broad overview of recent changes to the New Source Review (NSR) process used by the United States Environmental Protection Agency (EPA) and the states to review air pollution from large industrial projects. The NSR process is designed to ensure that air quality is maintained in areas where the air quality already meets EPA's health based standards, or to bring areas that are violating the health-based standards into compliance.

For newly proposed "greenfield" sources there is no change in the NSR process. The changes to the NSR process described in this report apply to sources undergoing a modification to their existing operations. EPA's stated purpose for implementing these changes to the NSR process is to provide companies more flexibility to respond to rapidly changing markets and to plan for future investments in pollution control and prevention technologies. EPA does not believe that these changes to the NSR process will result in increases in emissions of the criteria pollutants. This view is currently (October 2003) being challenged in the courts by those who believe these changes will result in a weakening of the NSR process and will cause an increase in emissions of the criteria pollutants.

Congress established authority for the NSR process when they adopted the Clean Air Act and subsequent Clean Air Act Amendments. Once Congress passed the enabling legislation, it became EPA's responsibility to write "regulations", or the rules that govern how companies must comply. In addition to regulations, EPA issues guidance which is not legally binding, but indicates EPA's intentions for how the regulations are to be interpreted and serves as a basis for enforcement actions. Information for locating the laws, regulations, and guidance is given below.

Item	Citation	Website
Clean Air Act (CAA)	Title 42 of the United States Code, Sections 7401-7671q (or 42 USC §§7401-7671q)	http://www.epa.gov/epahome/laws.htm
EPA's regulations to implement the CAA	Title 40 of the Code of Federal Regulations, Parts 50-97 (or 40 CFR Part 50- Part 97)	http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-C.htm
Interpretative Guidance	Not Applicable	http://www.epa.gov/region07/programs/artd/air/nsr/nsrpg.htm
New Source Review Reform Regulation, December 31, 2002	Title 40 of the Code of Federal Regulations, Parts 51 and 52 (or 40 CFR Part 51- Part 52)	http://www.epa.gov/air/nsr-review/02-31899.pdf
EPA Website on New Source Review	Not Applicable	http://www.epa.gov/ttn/nsr/welcome.html

The New Source Review (NSR) regulations are actually divided into two parts. The “Prevention of Significant Deterioration”, or “PSD” regulations (40 CFR Part 52.21) govern sources located in areas where the air meets EPA’s health based standards (“Attainment” areas). The “Nonattainment” regulations govern new sources or changes in areas that do not “attain”, or meet, EPA’s standards. Both sets of regulations require permits from large facilities that are undergoing major changes or for new large facilities; however, the requirements for obtaining permits and the exemption levels vary between the two programs. This document covers only the “PSD” regulations, as those regulations have been revised recently. Please keep in mind that this document is a simplified assessment of the PSD regulations and does not attempt to explain every nuance of the regulation. For more precise information or wording, please reference the preamble and the regulation; one easy place to find the December 31, 2002 regulation is <http://www.epa.gov/air/nsr-review/02-31899.pdf>. EPA also has another useful informational website on NSR at <http://www.epa.gov/ttn/nsr/welcome.html>.

EPA’s health based standards have been developed for several individual pollutants, known collectively as “criteria” pollutants. The pollutants that have health-based standards established are: sulfur dioxide (SO₂), oxides of nitrogen (NO_x), carbon monoxide (CO), lead (Pb), ozone, and particulate matter. Ozone is actually formed by a series of atmospheric reactions between NO_x and volatile organic compounds (VOCs); the PSD regulations include VOCs as the pollutant of concern instead of ozone. These standards are referred to as the “National Ambient Air Quality Standards”, or NAAQS.

While it is unusual, the PSD permitting process can also be triggered by several other pollutants, including asbestos, mercury, beryllium, fluorides, vinyl chloride, reduced sulfur and reduced sulfur compounds (sulfur which is in a chemically reduced form as in emissions from pulp and paper plants), hydrogen sulfide, sulfuric acid mist, municipal waste combustor emissions (including organics, metals, and acid gases), or municipal solid waste landfill emissions.

In order to fall within the requirements for a PSD permit, a company must be located within an attainment area for the pollutant of interest and the company must be either building a new large facility or making a physical or operational change to an existing facility that results in a significant increase in emissions. If neither of these apply, the plant may still have to obtain a simpler type of permit. A state permit may be required if they are changing the process or building a new plant, or they may have to obtain or modify an existing operating permit.

The process of obtaining a PSD permit usually requires two to three years. The long time frame is needed to gather and analyze data to demonstrate the impact of the proposed facility. In addition to measuring the level of pollution already in the air, the applicant must also conduct computer modeling to predict the impact of the emissions on the surrounding area. To finally obtain a PSD permit, the applicant must demonstrate that:

1. The plant will not cause or contribute to a violation of the NAAQS
2. Equipment will control air pollution in compliance with “Best Available Control Technology”, or BACT.

3. Soil, vegetation, and visibility of the surrounding areas will not be adversely affected
4. Class I areas, such as National Parks and Wilderness areas will not be adversely affected.

This analysis is available for public review and comment during the public participation process prior to issuance of a Prevention of Significant Deterioration (PSD) permit.

Several aspects of the PSD regulations were changed by EPA last December. These changes are not yet in effect in Virginia, and must be incorporated into Virginia's regulations by January 6, 2006. Once adopted, though, the changes will significantly impact which projects will be required to undergo PSD review. A simple summary of the major changes is given in each of the following sections. In general, the changes include:

Section 2. The revised regulations allow for Plantwide Applicability Limitations (PALs) to be established by the facility, which allows greater flexibility to modernize operations without increasing air pollution. The PAL requires that facilities agree to continue operating within strict emissions caps called PALs, set at an emissions level that PSD would not be triggered. These plants are given additional flexibility to modify their operations without undergoing PSD, as long as the modifications do not cause emissions to violate their plantwide cap.

Section 3. Pollution Control and Prevention (PCP) Exclusion are included to encourage companies to invest in pollution prevention projects. In the past, it was possible to trigger the PSD regulations by installing pollution control equipment. The revised regulation clarifies that facilities undertaking specified environmentally beneficial activities will be free to do so upon submission to their permitting authority of a notice, rather than having to wait for adjudication of a permit application.

Section 4. The Clean Unit Test is also intended to encourage companies to voluntarily install top-notch air pollution controls. Once BACT is installed, clean units with an NSR permit or other regulatory limit that requires the use of the best air pollution control technologies are exempt from PSD for future changes as long as they continue to operate within the permitted limits.

Section 5. The Emissions Calculation Test Methodology changes the way that a facility (except electricity generating plants) calculates the emissions change that will result from the proposed project. The Actual-to-Projected-Actual Test allows that companies use any consecutive 24 month period within the past ten years to determine the "baseline actual" emissions. The requirement specifies that the baseline must be adjusted for any required emission controls and also requires that companies keep records of emissions for at least five years after a process change that has not been required to undergo PSD review.

SECTION 2. PLANTWIDE APPLICABILITY LIMITS (PALs)

A plantwide applicability limit (PAL) is a voluntary option that allows a major stationary source to manage facility-wide emissions without triggering major New Source Review (NSR). EPA's new PAL program is based on plantwide actual emissions. If the emissions from a facility are maintained below a plantwide actual emissions cap (an "actuals PAL"), then the facility may avoid major NSR permitting process when it makes alterations to the facility or individual emissions units. In return for this flexibility, the facility must monitor emissions from all emissions units under the PAL, including recordkeeping, monitoring, and reporting.

The PAL option provides a voluntary alternative for determining NSR applicability. Actuals PALs are rolling 12-month emissions caps (that is, tons per year limits) that include all conditions necessary to make the limitation enforceable as a practical matter. PALs are allowed on a pollutant-specific basis. Sources may also opt for actuals PALs for more than one pollutant. Major NSR applicability provisions continue to apply at a facility to air pollutants that have no PAL.

The following describes the specific requirements for actuals PALs.

1. General Requirements

To obtain a PAL, the source must submit an application containing:

- a list of all emissions units and their size;
- federal and state requirements, emission limitations, and work practice requirements to which each emissions unit is subject; and
- baseline actual emissions, including any quantifiable fugitive emissions, for the emissions units.

Based on this application, the department will establish a PAL in a federally enforceable permit--for example, a "minor" NSR construction permit, a major NSR permit, or the operating permit program.

A PAL permit must undergo a 30-day public comment period. If the PAL is established in a major NSR permit, major NSR public participation procedures apply. When establishing a PAL, the source must comply with all applicable requirements of the department's minor NSR program, including modeling. Additionally, the source must meet all Title V requirements. When adding new emissions units under a PAL, the source must comply with minor NSR permit requirements for public comment. In contrast, when adding new emissions units that will require an increase in a PAL, the source must comply with the department's major NSR permit requirements for public comment.

2. How the PAL Level is Determined

Generally, the PAL level for a specific pollutant is calculated by summing the baseline actual emissions of the PAL pollutant for each emissions unit, then adding an amount equal to the applicable significant level.

The source must identify all existing emissions units (greater than 2 years of operating history) and new emissions units (less than 2 years of operating history since construction). When establishing the actuals PAL level, the source must calculate the baseline actual emissions from existing emissions units that existed during the 24-month period described below. The baseline actual emissions will equal the average rate, in tons per year (tpy), at which the emissions units emitted the PAL pollutant during a consecutive 24-month period, within the 10-year period immediately preceding the application for a PAL.

Sources have broad discretion in selecting the consecutive 24-month period in the last 10 years to determine the baseline actual emissions. Only one consecutive 24-month period may be used to determine the baseline actual emissions for such existing emissions units. For any emissions unit that is constructed after the 24-month period, emissions equal to its potential to emit (PTE) must be added to the PAL level. Additionally, if an emissions unit is permanently shut down since the 24-month period, its emissions must be subtracted from the PAL level.

The baseline actual emissions for an emissions unit cannot exceed the emission limitation allowed by the permit or newly applicable state or federal rules in effect at the time the PAL is set. This means that for the purpose of setting the PAL, baseline actual emissions for an emissions unit will include an adjustment downward to reflect currently applicable requirements. Additionally, a reduced PAL level will be specified in the permit to become effective on the future compliance dates of any applicable federal or state requirements. Different rules apply for determining baseline actual emissions for electric utility steam generating units (EUSGUs).

3. Length of PAL Effectiveness, Expiration, and Termination

The term of a PAL is 10 years. At least 6 months prior to, but not earlier than 18 months from, the expiration date of a PAL, the source must request either renewal or expiration of the PAL. If this deadline is met, the existing PAL will continue as an enforceable requirement until the department renews the PAL.

If a source requests expiration of the PAL, it must submit a proposed approach for allocating the PAL among its existing emissions units. The department decides whether and how the allowable emission limitations will be allocated. As under the PAL, emissions units must comply with their allowable emission limitations on a 12-month rolling basis. However, the department may accept a variety of monitoring systems to demonstrate compliance.

Until the revised permit with allowable emission limitations covering each emissions unit is issued, the source must comply with a source-wide multi-unit emissions cap equivalent to the

PAL level. After a PAL expires, physical or operational changes will no longer be evaluated under the PAL applicability provisions.

Notwithstanding PAL expiration, the source must continue to comply with state and federal requirements for a specific emissions unit. When the PAL expires, none of the federal NSR limits, which the PAL originally eliminated, would return.

EPA's rules do not contain specific provisions related to terminating a PAL. Such decisions are handled between the source and the department.

4. PAL Renewal

As previously discussed, a source must submit an application to renew a PAL at least 6 months prior to, but not earlier than 18 months from, the PAL expiration date. If a complete application to renew the PAL is submitted by this deadline, the existing PAL will continue as an enforceable requirement until the department issues the permit with the renewed PAL. As part of the renewal application, the source must recalculate and propose its maximum PAL level, taking into account newly applicable requirements and the factors described below.

The department will review the application and issue a proposed permit for public comment. As part of this process, the department will provide a rationale for the proposed PAL level. If the source's potential to emit (PTE) has declined below the PAL level, the PAL will be adjusted downward so that it does not exceed the source's PTE.

In addition, the department may renew the PAL at the same level without consideration of other factors, if the sum of the baseline actual emissions for all emissions units at the source plus an amount equal to the significant level is equal to or greater than 80 percent of the PAL level. However, if the baseline actual emissions plus an amount equal to the significant level is less than 80 percent of the PAL level, the department may set the PAL at a level that it finds to be more representative of the source's baseline actual emissions, or that it finds appropriate considering air quality needs, advances in control technology, anticipated economic growth, or other factors.

In some cases, the department may exercise its discretion in deciding that an adjustment is not warranted. If a source would ordinarily be subject to a downward adjustment, but the department believes such an adjustment is not appropriate, the source may propose another level. The department may approve the level that the source proposes if it determines that the level is reasonably representative of the source's baseline actual emissions. Similarly, the department may determine that a lower level best represents the baseline actual emissions from the source.

Consistent with the effective period for the initial PAL, all renewed PALs are effective for 10 years.

5. Increasing a PAL During the Effective Period

The department may allow an increase in a PAL during the effective period if the source is adding new emissions units or changing existing emissions units in a way that would cause an exceedance of its PAL. However, EPA only allows such an increase if the source would not be able to maintain emissions below the PAL level, even if it assumed application of BACT-equivalent controls on all existing major and significant units. Such units must be adjusted for current Best Available Control Technology (BACT) levels of control unless they are currently subject to a BACT or Lowest Achievable Emission Rate (LAER) requirement that has been determined within the preceding 10 years, in which case the assumed control level must be equal to the emissions unit's existing BACT or LAER control level. The PAL permit must require that the increased PAL level will be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

Proposed new emissions units and existing emissions units undergoing a change must go through major NSR permitting, regardless of the magnitude of the proposed emissions increase. This is because the significant level for the pollutant is incorporated into the PAL. These emissions units must comply with any emissions requirements resulting from the major NSR process, even though they have also become subject to the PAL program or remain subject to the PAL.

To request a PAL increase, the source must submit a complete major NSR permit application. As part of this application, the source must demonstrate that the sum of the following exceeds the PAL:

- baseline actual emissions of its small emissions units.
- baseline actual emissions from its significant and major emissions units.
- allowable emissions of the new or modified existing emissions unit(s).

After the department has completed the major NSR process, and determined the allowable emissions for the new or modified emissions unit(s), the department will calculate the new PAL as the sum of the allowable emissions of the new or modified emissions unit(s), plus the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions from significant and major emissions units adjusted for the appropriate BACT level of control as described above. The department will modify the PAL permit to reflect the increased PAL level pursuant to public notice.

6. Circumstances That Would Cause a PAL To Be Adjusted During the PAL Effective Period

During the term of the PAL, at Title V permit renewal or at PAL renewal, the department may reopen a PAL permit and adjust the PAL level, either upward or downward.

The department must reopen the permit:

- to correct typographical or calculation errors or to reflect a more accurate determination of emissions used to establish the PAL;
- to reduce the PAL if the source owner creates creditable emissions reductions for use as offsets; or
- to revise a PAL to reflect an increase in the PAL.

The department may reopen the permit to:

- reduce the PAL to reflect newly applicable federal requirements with compliance dates after the PAL effective date;
- reduce the PAL consistent with any other requirement that is enforceable as a practical matter, and that the state may impose on the major stationary source under the State Implementation Plan (SIP); or
- reduce the PAL if necessary to avoid causing or contributing to a National Ambient Air Quality Standards (NAAQS) or prevention of significant deterioration (PSD) increment violation, or to an adverse impact on an air quality related value (AQRV) that has been identified for a Federal Class I area.

While the department is not required to immediately reopen the PAL permit to reflect newly applicable federal or state regulatory requirements that become effective during the PAL effective period, the PAL must be adjusted at the time of the source's Title V permit renewal or PAL permit renewal. Notwithstanding, the department may reopen the PAL permit to reduce the PAL to reflect newly applicable federal or state requirements before EPA otherwise requires.

7. Elimination of Existing Emission Limitations

An actuals PAL may eliminate enforceable permit limits a source may have previously agreed to in order to avoid the applicability of major NSR to new or modified emissions units. Under the major NSR regulations, if a source relaxes these limits, the units become subject to major NSR as if construction had not yet commenced. Should a PAL be requested, the PAL may eliminate annual emissions or operational limits that were previously in effect at the stationary source to avoid major NSR for the PAL pollutant. This means that the source may relax or remove these limits without triggering major NSR when the PAL becomes effective. Before removing the limits, the department will make sure that the source meets all other regulatory requirements and that the removal of the limits does not adversely impact the NAAQS or PSD increments.

EPA has stated whether compliance with requirements contained in a PAL permit could demonstrate compliance with certain pre-existing requirements on individual units. The department may assess, on a case-by-case basis, whether any streamlining would be appropriate in the Title V permit.

8. Monitoring Requirements

Each permit must contain enforceable requirements that accurately determine plantwide emissions. A PAL monitoring system must consist of one or more of four standard approaches allowed by EPA, or an alternative approach if approved by the department. Use of monitoring systems that do not meet the minimum requirements approved by the department renders the PAL invalid. Any monitoring system authorized for use in the PAL permit must be based on sound science and must conform to generally acceptable scientific procedures for data quality and manipulation.

In return for the increased operational flexibility of a PAL, the permit must include sufficient data collection requirements to ensure compliance with the PAL at all times. In addition, the PAL permit must contain enforceable provisions that ensure that the monitoring data meet the minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.

9. Process for incorporating the PAL into a Title V permit

As discussed previously, a PAL is established in a federally enforceable permit using either the minor or the major NSR permit process, eventually rolling these requirements into the Title V permit. The department's rules for establishing or renewing PALs must include a public participation process prior to permit approval of the PAL, including a 30-day comment period. PALs established through the major NSR process are subject to major NSR public participation requirements. When adding a new emissions unit under an established PAL, the source must comply with the minor NSR permit requirements for public comment.

The process for incorporating the conditions of a PAL into the Title V permit depends on whether the initial Title V permit has already been issued. If the initial Title V permit has not been issued, a PAL created in a minor or major NSR permit would be incorporated during initial issuance of the Title V permit. If the initial Title V permit has already been issued, the PAL would be incorporated through the state's operating permit modification procedures. EPA recommends that Title V permits be renewed concurrently with issuance of PALs.

Once a PAL is established, a change at a facility is exempt from major NSR and netting calculations, but may require a Title V permit modification. Whether a Title V permit modification would be required, and which permit modification process would be used, is governed by the state's operating permit procedures.

SECTION 3. POLLUTION PREVENTION PROJECT EXCLUSION

What is the Pollution Control and Prevention (PCP) Exclusion?

The PCP Exclusion exempts certain pollution prevention projects from NSR permit requirements. PCPs that do not meet the exclusion requirements will be subject to NSR permit requirements. Even those PCPs that do meet the exclusion may still be subject to other permit programs such as minor NSR regulations.

The PCP Exclusion provides an exemption in the case where a source makes a physical or operational change such as 1) the add-on of an air pollution control device; 2) switching to a less-polluting fuel; or 3) other pollution prevention project as defined by the rule (raw material substitutions, work practices, process changes, et. al).

The replacement or upgrading of existing emissions control equipment may also qualify for the PCP Exclusion. The replacement or upgrade must result in better control efficiency. Alternatively, the replacement or upgrade can result in the same control efficiency, but must be demonstrated to be more energy efficient.

The PCP Exclusion applies to existing sources only. It does not apply to changes that increase the capacity of an existing emissions unit. Changes that may occur at the source, but that are not necessary to reduce emissions through the PCP may not be included under the PCP Exclusion.

The PCP Exclusion may be applied in attainment and in non-attainment areas. However, any significant emission increase of non-attainment pollutants must be offset with acceptable emissions reductions.

How is the PCP Exclusion used?

The PCP Exclusion is used by those sources that want to apply an air pollution control project to an existing source that would otherwise be subject to NSR permit requirements due to collateral emissions. Collateral emissions are those emissions that are associated with the air pollution control project.

Example: An existing source wants to install a thermal oxidizer to reduce volatile organic carbon (VOC) emissions by burning them as a fuel. The proposed PCP will reduce VOC emissions by 80 tons per year (tpy), but will increase oxides of nitrogen (NOx) emissions by more than 40 tons per year. No other changes are being made at the emission source. Under the PCP Exclusion, the PCP is exempt from NSR permit requirements (although it may still be subject to minor NSR permit requirements).

What projects qualify for the PCP Exclusion?

Listed Projects

The EPA lists certain projects that qualify for the PCP Exclusion. These are projects that the EPA has determined are 1) demonstrated in practice; and 2) provide an overall environmental benefit by reducing emissions of the primary pollutant when balanced against any potential for emissions increases of collateral pollutant(s).

The EPA lists the following PCPs in the final rule:

- Conventional and advanced flue gas desulfurization
- Sorbent injection
- Electrostatic precipitators
- Baghouses
- High efficiency multiclones
- Scrubbers
- Flue gas recirculation
- Low-NO_x burners or combustors
- Selective non-catalytic reduction
- Selective catalytic reduction
- Low emission combustion (for internal combustion engines)
- Oxidation/absorption catalyst
- Regenerative thermal oxidizers
- Catalytic oxidizers
- Thermal incinerators
- Hydrocarbon combustion flares
- Condensers
- Absorbers and Adsorbers
- Biofiltration
- Floating roofs (for storage vessels)

Other presumed environmentally beneficial PCPs include:

- Switching to a different ozone depleting substance with a less damaging ozone-depleting effect
- Switching from a heavier grade of fuel oil to a lighter fuel oil, or any grade of oil to 0.05 percent sulfur diesel
- Switching from coal, oil, or any solid fuel to natural gas, propane, or gasified coal.
- Switching from coal to wood, excluding construction or demolition waste, chemical or pesticide treated wood, or other forms or “unclean” wood
- Switching from coal to #2 fuel oil (0.5 percent maximum sulfur content)
- Switching from high sulfur coal to low sulfur coal (maximum 1.2 percent sulfur content)

The EPA presumes that these listed projects will be designed and operated in a manner that is consistent with proper industry, engineering, and reasonable practices. It is also presumed that the increases in emissions of collateral pollutants will be minimized within the physical configuration and operational standards usually associated with the emissions control device or strategy.

The source owner/operator is required to certify that this is true in the notification sent to the reviewing authority. The notice must include: 1) A description of the project, 2) an analysis of the environmentally beneficial nature of the PCP, including a projection of emissions increases and decreases, and 3) a demonstration that the project will not have an adverse air quality impact.

Construction and installation of a listed PCP can be started once the owner/operator submits this certification. However, this is at the owner/operators risk. If the reviewing authority determines that the PCP Exclusion is not supported by the information submitted, the source can be ordered to delay or cancel the project.

Unlisted Projects

For unlisted projects, there is no such presumption as described above. Therefore, unlisted projects 1) must be demonstrated to be environmentally beneficial, 2) cannot cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) increments, and 3) cannot adversely impact an Air Quality Related Value (AQRV) in a Federal Class I Area. Conditions 1) and 2) are known as the “cause or contribute test”.

An unlisted PCP must be demonstrated to meet the “cause or contribute test” on a case-by-case basis by the source owner/operator proposing the PCP. The reviewing authority must determine that the proposed project meets these requirements. If the demonstration is deemed inadequate, the reviewing agency must reject the proposed PCP. The source submits the same information required for listed projects. The difference with unlisted projects is that construction and installation of an unlisted PCP cannot begin until the reviewing authority approves the PCP.

How are emission increases of collateral pollutants calculated for PCPs?

Emission changes associated with the PCP are determined by using an actual-to-projected-actual format.

Emission reductions achieved by the PCP cannot be used as netting credits or offsets. For example, a facility installs a PCP on an existing emission unit that reduces volatile organic carbon (VOC) emissions by 25 tpy. The facility is also installing a new emission unit that will increase VOC emissions by 60-tpy. The 25-tpy reduction from the PCP cannot be applied to the 60-tpy increase from the new emission unit to net out of New Source Review (NSR) permit requirements.

SECTION 4. CLEAN UNIT DESIGNATION

The Clean Unit Designation is a status that a facility can achieve by voluntarily installing Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) technology prior to the effective date of a state's New Source Review (NSR) permitting process. This would be the date that EPA publishes the acceptance of the state's NSR State Implementation Plan (SIP) for the Clean Unit Designation. The Clean Unit Designation can also be requested after the effective date of the state's NSR permitting process if the state has an approved SIP for the Clean Unit Designation process. The motivation for a facility to try to achieve this status is simple: An emissions unit that has achieved the Clean Unit Designation is exempt from future Prevention of Significant Deterioration (PSD) permitting and permit modification requirements as long as the unit continues to operate within its permitted limits. The Clean Unit status can last up to a maximum of 10 years before having to be renewed.

Clean Unit status is pollutant specific. If an emissions unit has qualified for Clean Unit status in an area that is in attainment for the specific pollutant and the area becomes re-designated as non-attainment for that pollutant, the unit would remain in Clean Unit status until its expiration. To re-qualify the emissions unit would have to meet the requirements that apply for nonattainment areas.

How to Qualify

The Clean Unit Applicability Test

Qualifying

A. Existing emissions units are automatically qualified, if (Must Meet All of Below):

- Emission Unit has gone through major NSR permitting review in the last 10 years
- BACT or LAER, dependent upon the area attainment status, was applied to the emissions unit
- Emissions unit is in compliance
- Must have some measure of control technology [including pollution prevention, work practices] **and**
- Must have made a capital investment for the control technology

B. New and Existing emissions units that have not gone through major NSR permitting review:

1. Must have made a capital investment for the control technology, **and**
2. Go through a major NSR permitting process, **or**
3. Go through a SIP-approved permitting process that provides an alternative demonstration to NSR. Public notice and the opportunity for public comment are required.

NSR Alternative Demonstration

- Air quality test [impacts/modeling] – Demonstrate that the emissions unit will not cause or contribute to a National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) increment violation or adversely impact an Air Quality Related Value (AQRV) [such as visibility] that has been identified for a Federal Class I area by an Federal land Manager (FLM) and for which information is available to the general public.
- If the emissions unit's control technology is installed on or after the date that the provisions of the Clean Unit applicability test are effective in your state, you must apply for Clean Unit status from the reviewing authority at the time the control technology is installed.
- Demonstrate that when the control technology was installed, that it was equivalent to BACT/LAER.
- a. Comparison of your control technology to the RACT-BACT-LAER Clearinghouse (RBLC)

In a Nonattainment Area- compare your control technology to the best performing 5 similar sources in the RBLC with LAER determined in last 5 years. If emission limit of the control technology is at least as stringent as any one of the 5 best-performing units and the emissions pass the air quality test [impacts], then the reviewing authority shall presume that it qualifies as a Clean Unit.

In an Attainment Area- compare your control technology to all of the BACT and LAER decisions entered in the RBLC in the past 5 years. It must be technically feasible to apply the BACT or LAER control technology to your emissions unit type. If your control technology achieves a level of control equal to or better than the average of these determinations and the emissions unit passes the air quality test, then the reviewing authority shall presume that it qualifies as a Clean Unit.

- Upon submission of the control technology demonstration, the reviewing authority will also consider other BACT/LAER determinations that are not included in the RBLC to decide whether the proposed emissions unit/rate is comparable to BACT/LAER, and incorporate this information into its decision as appropriate. The public will have an opportunity to review and comment on the reviewing authority's decision to designate an emissions unit as a Clean Unit.

or

- b. Case by Case:

In a Nonattainment Area- your emissions unit must achieve a level of control technology that is "substantially as effective" as LAER.

In an Attainment Area- your emissions unit must achieve a level of control technology that is "substantially as effective " as BACT.

In both cases the evaluating authority makes a decision whether your control technology is "substantially as effective " as the BACT/LAER technology for a specific emissions unit.

Re-qualifying:

Re-qualifying can be done at the expiration of the maximum 10 year Clean Unit status, or if the Clean Unit status is lost.

It is your choice of which process to follow:

A. Major New Source Review (NSR) permitting and review

or

B. Alternative Demonstration [See above]

The reviewing authority will make a determination concerning current BACT/LAER or comparable control technology. Any previous offset or mitigation requirements established as a result of a previous major NSR determination will remain in force.

- If it is determined that the control technology used to establish the Clean Unit status for the emissions unit is still BACT/LAER or comparable, then the emissions unit must then go through an air quality test*, public notice, and an opportunity for public comment. No additional capital investment for the emission unit's control technology is needed.
 - If the control technology that was used to establish the Clean Unit status is no longer BACT/LAER comparable then you must install new or upgraded control technology that will meet the new BACT/LAER requirements on the emissions unit. Once again you must follow the requirements required for either an attainment area or non-attainment area: designation. You must use BACT/LAER comparable technology or the case-by-case process [see Qualifying above]. You must also go through an air quality test*, public notice, and an opportunity for public comment. You must also make a new capital investment for the new control technology.
 1. **In a Nonattainment Area** - You must demonstrate that the control of the unit meets LAER or comparable requirements to LAER.
 2. **In an Attainment Area** - You must demonstrate that the control of the unit meets BACT/LAER or comparable requirements.
- * Demonstrate air quality test [impacts/modeling] by showing that the emissions unit will not cause or contribute to NAAQS or PSD increment violation or adversely impact an AQRV [such as visibility] that has been identified for a Federal Class I area by an FLM and for which information is available to the general public.

Calculating Emissions Increases for Subsequent Changes to Meet the Major NSR Applicability Test for Clean Units

- Clean Units are subject to an alternative major NSR applicability test for calculating emissions increases for subsequent changes.
 - A. To continue the Clean Unit status, you must determine that a project can not cause a need to change:
 1. emissions limitations or work practice requirements contained in the permit which were established in conjunction with BACT, LAER or Clean Unit determinations;
- or**

2. any physical or operational characteristics that formed the basis for Best Available Control Technology (BACT), Lowest Achievable Emission Rate (LAER) or Clean Unit determination for that particular emissions unit.
 - If it does, you lose Clean Unit status and the project is subject to NSR as if it never was a Clean Unit.
 - If it does not, then you maintain Clean Unit status and no emissions increase is deemed to occur from the project for the purposes of major NSR.

Clean Unit Test Effective Dates

- **Existing major NSR approved emissions units and emissions units that re-qualify through major NSR review that implement new control technology to meet current BACT/LAER**
 - The date the unit was placed into service or 3 years after the issuance date of the major NSR permit, whichever is earlier. However, the effective date can be no sooner than the effective date of the EPA approved Clean Unit provisions in the State Implementation Plan (SIP) of the state where the facility is located.
- **New and Existing emissions units that have not gone through NSR – [See Alternative Demonstration above]**
 - The effective date is the later of the following dates:
The date the Agency permit that designates the emissions unit as a Clean Unit is issued, or the date the emissions unit air pollution control measures went into service.
- **Re-qualified through major NSR using existing control technology meeting current BACT/LAER**
 - Effective date is when the major NSR permit is issued.

For all emissions units, the Clean Unit status expires any time the owner or operator fails to comply with the provisions for maintaining the Clean Unit status that are found in the final rule. When your Clean Unit status expires, you are subject to major NSR applicability test as if your emissions unit is not a Clean Unit. The permitted emissions levels established for the Clean Unit do not expire.

Clean Unit Status and Multiple Pollutants

- Clean Unit status is pollutant-specific and can be granted for more than one pollutant. [Volatile organic carbon (VOC) compounds can be grouped as a single pollutant.]
- You may qualify for simultaneous Clean Unit status for other pollutants at those emissions units that are sufficiently controlled, to independently qualify as “clean” for each pollutant.

- For units that apply for Clean Unit status and do not have a major NSR permit, the reviewing agency must specify the pollutants for which the Clean Unit status applies as part of the permitting process.

SECTION 5. EMISSIONS CALCULATION TEST METHODOLOGY

The NSR reform includes the following two changes that can affect the way in which emissions increases are calculated to determine whether physical change or change in the method of operation triggers the major NSR requirements.

1. New procedure for determining "baseline actual emissions".
2. "Actual-to-projected-actual applicability test" to calculate emissions increases.

Baseline Actual Emissions

What is the "baseline actual emissions"?

The existing regulations (prior to the NSR reform changes) defined actual emissions as the emission rate during a 2-year period which precedes the change and which is representative of normal source operation. If a source wants to use a different 2-year period, it must demonstrate that a different 2-year period is more representative of normal source operation.

The NSR reform will introduce a new terminology called "baseline actual emissions", which allows the use of any consecutive 24-month period in the past 10-years as to calculate baseline actual emissions in tons per year. However, this methodology will not apply to power plants, which will continue to apply the methodology (based on WEPCO Rule) that generally allows the use of any consecutive 24-month period in the past 5 years as a baseline.

When can the baseline actual emissions be used?

The baseline actual emissions methodology can be used for only the following three specific purposes involving existing emissions units.

1. For modifications, to determine a modified unit's pre-change baseline actual emissions as part of the new actual-to-projected-actual applicability test.
2. For netting, to determine the pre-changed actual emissions of an emissions unit that underwent a physical or operational change within the contemporaneous period. Separate baseline periods can be selected for each contemporaneous increase or decrease.
3. For PALs, to establish PAL level.

How to calculate the baseline actual emissions?

The baseline actual emissions are calculated as the annual average emissions rate in tons per year (tpy) from any consecutive 24 months of source operation within the past 10 years. The following are key points useful in calculating baseline actual emissions.

- If the proposed modification requires a major or minor NSR permit, the past 10-year period is immediately preceding the date on which DEQ determines the permit application to be complete. If a permit is not required, the past 10-year period is immediately preceding the date on which the actual construction of physical or operational change(s) begins.
- The most current emission factors or emission calculation methodologies are to be used in calculating the baseline actual emissions.
- The calculated baseline actual emissions are to be adjusted (lowered) if any legally enforceable limits that now apply but were not applicable during the selected 24-month period (or any part of that period).
- For a regulated pollutant, when a project involves multiple emissions units, same 24-month period must be used for all the emission units being changed. However, a different 24-month period can be used for each regulated pollutant.
- For new emissions units (a unit existed for less than 2 years) that will be changed by the project, the baseline actual emissions rate is zero if the operation of the unit has not yet begun. It will be equal to the unit's PTE once it has begun to operate.
- If a particular existing emissions unit did not exist during the selected 24-month period, its emission rate will be counted as zero. If an emissions unit operated for only a portion of the selected 24-month period, its average annual emissions rate will be calculated using an emissions rate of zero for that portion of time when the unit was not in operation.

An example of baseline actual emissions

<u>Year</u>	<u>VOC Emissions</u>
1993	750 Tpy
1994	850 Tpy
1995	950 Tpy
1996	800 Tpy
1997	60 Tpy (Requirement for thermal oxidizer control with 90% reduction)
1998	50 Tpy
1999	50 Tpy
2000	40 Tpy
2001	25 Tpy
2002	35 Tpy

According to the old rule, the baseline actual emissions are 30 tpy (average of the 2-year period, which precedes the change).

According to the new rule, the baseline actual emissions are 900 tpy (average of any consecutive 24-month period in the past 10-years; in this case, average emissions of 1994

and 1995). However, it must be lowered because 90 percent emission reduction requirement has been applied since 1997. So the adjusted baseline actual emissions are 90 tpy.

Actual-to-Projected-Actual Applicability Test

What is the Actual-to-Projected-Actual Applicability Test?

The actual-to-projected-actual (ATPA) applicability test is a means made available to determine the whether a physical and/or operational change at an existing emissions unit would result in an increase in emissions of a regulated NSR pollutant. The ATPA test is used together with the “baseline actual emissions” procedure (discussed elsewhere in this report). Electric utility steam generating units (EUSGUs) and non-ESUGUs are treated differently under NRS rules. This discussion pertains to non-EUSGUs.

The ATPA applicability test is a new procedure for calculating emission increases. It supplements the existing actual-to-potential applicability test that may still be used within the scope of the new ATPA applicability test. Since the actual-to-potential approach represents the worst-case scenario for calculating emission increases, using this approach alleviates the facility of additional record keeping requirements that apply to those using the ATPA applicability test.

The purpose of adding the ATPA approach is to allow beneficial modifications to be made to an existing emissions unit that might trigger major NSR permitting under the actual-to-potential approach. The prospect of undergoing major NSR may outweigh the benefits of the proposed physical or operational change.

It is expected that the use of the ATPA applicability test will result in fewer projects triggering major NSR permitting requirements. It is intended that use of the ATPA applicability test should not adversely affect the environment but rather should cause some environmentally beneficial projects to proceed resulting in an improvement in the environment. In addition, the ATPA applicability test provides benefits for the public in the form of improved recordkeeping and reporting requirements. The source’s air quality impacts calculations are not affected by this new applicability test.

How is the ATPA Applicability Test Performed?

The ATPA applicability test represents a modification of the way in which a source may determine whether emissions at existing units will increase by using projected actual emissions. This projection is made by using the maximum annual rate at which the changed units are projected to emit in any of five (5) calendar years following when the time when the unit resumes regular operation after the project (or ten (10) years if the project increases the projects design capacity or potential to emit the regulated NSR pollutant).

These projections are used to calculate whether the project will results in a significant increase in emissions. Any emissions the unit could have accommodated before the change

and that are unrelated to the project may be excluded from this calculation. Emissions resulting from increased utilization from demand growth that the unit could have accommodated before the change may also be excluded.

What Additional Requirements Apply When the APTA Applicability Test is Used?

The source is required to track post-change annual emissions of the emissions units for the next 5 years (or 10 years if the project increases the projects design capacity or potential to emit the regulated NSR pollutant). At the end of each year, if the post-change annual emissions exceed the baseline actual emissions by more than a significant amount, and differ from the projection, then the source must prepare and submit a report to DEQ. This report is due within 60 days after the end of the year.

Sources using the unit's potential to emit instead of projected actual emissions are not required to track or report post-change emissions.

What Happens when Reported Annual Emissions Exceed Projected Actual Emissions?

The projected actual emissions do not become an enforceable emission limitation. However, if the annual emissions exceed the projected actual emissions, the source must report the emissions increase to DEQ within 60 days after the end of the year. Based on the emissions increase a major or a minor NSR permit may be required.

Attachment 2

**Detailed Description:
New Source Review Reform: Clean Units**

Prepared by:
**Subcommittee on NSR Reform
State Advisory Board on Air Pollution**

**Prepared for Submission to the Virginia
State Air Pollution Control Board**

October 14, 2003

Clean Units

1. Summary

An emissions unit qualifies as a Clean Unit, and qualifies to use the Clean Unit Applicability Test, if it has gone through a major New Source Review (NSR) permitting review and is complying with Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER). Conversely, if the emissions unit has not gone through a major NSR permitting review, it does not automatically qualify for Clean Unit status. These emissions units must first go through a State Implementation Plan (SIP) approved permitting process that includes a process for determining whether the emissions unit meets the criteria to be designated as a Clean Unit. This process must include public notice and opportunity for public comment.

To obtain Clean Unit status and qualify for the Clean Unit Applicability Test using a SIP-approved permitting process, your emissions unit must pass a two-part test:

- (1) The air pollution control technology (which includes pollution prevention or work practices) must be comparable to BACT or LAER;
You may demonstrate that the air pollution control technology (which includes pollution prevention or work practices) is comparable to BACT/LAER in two ways:
 - (a) by comparing your emissions unit's control level to BACT/LAER determinations for similar sources in the RACT, BACT, LAER Clearing House (RBLC); or
 - (b) by making a case-by-case demonstration that your emissions control is "substantially as effective" as BACT or LAER.
- and
- (2) it must demonstrate that the allowable emissions will not cause or contribute to a (National Ambient Air Quality Standard (NAAQS) or a Prevention of Significant Deterioration (PSD) increment violation, or adversely impact an Air Quality Regional Value (AQRV) [such as visibility] that has been identified for a Federally Protected Area for Air Quality (Federal Class I Area) by an Federal Land Manager (FLM) and for which information is available to the general public.

If your emissions unit automatically qualifies as a Clean Unit because it has been through major NSR permitting, you may use the Clean Unit applicability test for up to 10 years. The rule allows you to apply for Clean Unit status for control technologies you have installed in the past if you go through a SIP-approved permitting program that authorizes Clean Units and you qualify as a Clean Unit. The Clean Unit effective period for emissions units that must go through a SIP-approved permitting process to obtain Clean Unit status is consistent with the time frame for emissions units that automatically qualify as Clean Units. That is,

you may only use the Clean Unit applicability test for a period of 10 years. If you meet the requirements described in section 9, you may re-qualify for Clean Unit status. Upon expiration of Clean Unit status, the Clean Unit applicability test no longer applies to changes at the emissions unit.

2. Is Clean Unit Status Available in Both Attainment and Nonattainment Areas?

You may obtain Clean Unit status regardless of whether you are located in an attainment area or in a nonattainment area.

For sources in nonattainment areas which went through major NSR permitting while the area was nonattainment or which have qualified for Clean Unit status showing they are comparable to LAER, the permitted emissions level for the Clean Unit must have been offset.

Note: The emissions reductions resulting from installation of the control technology that is the basis of an emissions unit's status as a Clean Unit may not be used as offsets. However, emissions reductions below the level that qualified the unit as a Clean Unit may be used as offsets if they are surplus, quantifiable, permanent, and federally enforceable.

For emissions units that are designated as Clean Units and that are located in nonattainment areas, Reasonably Available Control Technology (RACT) and any other requirements for nonattainment area sources under the SIP will still apply.

Note: The only exception to **this ??** is that the specific major NSR requirements related to calculating emissions increases from a physical change or change in the method of operation for all other existing sources as described in the rule are not applicable to Clean Units. This is because the Clean Units are subject to an alternative major NSR applicability requirement for calculating emissions increases when changes are made.

As discussed in detail in section 3, the "substantially as effective" test for sources in nonattainment areas must consider only LAER determinations, except that emissions units in nonattainment areas that went through major NSR permitting while the area was designated an attainment area for that regulated NSR pollutant, and that received a permit based on a qualifying air pollution control technology, automatically qualify as Clean Units.

If your emissions unit received Clean Unit status while the unit was located in an attainment area and the area's attainment status subsequently changes to nonattainment, your emissions unit retains Clean Unit status until expiration. However, to re-qualify as a Clean Unit (see section 9), the unit will have to meet the requirements that apply in nonattainment areas.

3. How Do You Qualify As A Clean Unit?

Any emissions unit permitted through major NSR automatically qualifies as a Clean Unit, provided the BACT/LAER determination results in some degree of emissions control. (Discussion of the specific requirements for qualifying controls are in section 4.) These units already meet both the control technology and air quality criteria of the CAA and the NSR regulations.

EPA believes that the emission limitations (based on the BACT/LAER determination) and other permit terms and conditions (such as any limits on hours of operation, raw materials, etc., that were used to determine BACT/LAER) are protective of air quality.

Although emissions units that have been through major NSR automatically qualify for Clean Unit status, there are specific procedures for establishing and maintaining Clean Unit status. [Discussion of these procedures are in detail in sections 6 through 9.]

Your emissions units that have not gone through a major NSR permitting action that resulted in a requirement to comply with BACT or LAER may qualify for Clean Unit status if they are permitted under a SIP-approved permitting program that provides for public notice of the proposed determination and opportunity for public comment.

You must pass the two-part test to obtain Clean Unit status:

- (1) The air pollution control technology (which includes pollution prevention or work practices) must be comparable to BACT or LAER;
You may show that the air pollution control technology (which includes pollution prevention or work practices) is comparable to BACT/ LAER in one of two ways:
 - (a) by comparing your emissions unit's control level to BACT/LAER determinations for other similar sources in the RBLC; or
 - (b) by making a case-by-case demonstration that your emissions control is ``substantially as effective" as BACT or LAER.
- and
- (2) the allowable emissions will not cause or contribute to a NAAQS or PSD increment violation, or adversely impact an AQRV (such as visibility) that has been identified for a Federal Class I area by an FLM and for which information is available to the general public.

To make a demonstration using the first methodology in a nonattainment area, you must compare your control technology to the best-performing 5 similar sources in the RBLC for which LAER has been determined within the past 5 years. If the emission limitation that is achieved by your control technology is at least as stringent as any one of the 5 best-performing units, and the emissions

unit also passes the air quality test, then the reviewing authority shall presume that it qualifies as a Clean Unit.

In attainment areas, you must compare your control technology to all BACT and LAER decisions that have been entered into the RBLC in the past 5 years, and for which it is technically feasible to apply the BACT or LAER control to your emissions unit type. If your control technology achieves a level of control that is equal to or better than the average of these determinations, and the emissions unit also passes the air quality test, then the reviewing authority shall presume that your emissions unit qualifies as a Clean Unit.

After you have submitted your demonstration, the reviewing authority will also consider other BACT/LAER determinations that are not included in the RBLC to determine whether the proposed emissions rate is comparable to BACT/LAER, and incorporate this information into its determination as appropriate. In addition, the public will have an opportunity to review and comment on the reviewing authority's decision to designate an emissions unit as a Clean Unit. This approach ensures that you are meeting an emissions level comparable to that of BACT or LAER, while providing you flexibility to use the controls that are best suited to your processes.

Further Explanation:

EPA is providing this first methodology as a streamlined methodology for identifying Clean Units. Any unit that meets these qualifications shall be presumed to be a Clean Unit. Conversely, the opposite is not true. The reviewing authority shall not presume that a unit that does not meet the test is not a Clean Unit. The quality and number of determinations in the RBLC vary by different type of sources. The RBLC may not always identify all the types of control technology strategies that should qualify an emissions unit as a Clean Unit, or it may not provide a representative sample for making an appropriate determination. Therefore, even if you are unable to demonstrate that your emissions unit is a Clean Unit using this methodology, your reviewing authority shall not allow this outcome to prejudice its decision-making.

Accordingly, EPA is providing the second option for determining whether you qualify as a Clean Unit. If your emissions unit does not meet the emission limitation determined from the analysis of the RBLC described above (as appropriate for the area in which it is located), or if there is insufficient information in the RBLC to conduct the analysis, then you may still show, on a case-by-case basis, that your emissions unit will achieve a level of control that is "substantially as effective" as BACT or LAER, depending whether your emissions unit is in an attainment area or a nonattainment area. In an attainment area, your emissions unit must achieve a level of control that is "substantially as effective" as BACT. In a nonattainment area, your emissions unit must achieve a level of control

that is "substantially as effective" as LAER. The reviewing authority will make a decision on whether a particular air pollution control technology (which includes pollution prevention or work practices) is "substantially as effective" as the BACT/LAER technology for a specific source on a case-by-case basis.

EPA is not promulgating specific requirements or performance criteria for satisfying the "substantially as effective" test, because it believes reviewing authorities are in the best position to determine whether in fact a particular air pollution control technology (which includes pollution prevention or work practices) is "substantially as effective" as the BACT/LAER technology for a specific source. The case-by-case determinations must meet the same air quality test as those units going through a BACT/LAER determination. Moreover, the public has opportunity for public review and comment on the "substantially as effective" decision. With these safeguards, EPA believes the "substantially as effective" test will ensure determinations that meet both the control technology and air quality tests, as well as allow sources to implement the controls that are best suited to their individual processes.

Under the second part of the test to determine whether your unit qualifies for Clean Unit status, you must demonstrate that the allowable emissions will not cause or contribute to a NAAQS or PSD increment violation, or adversely impact an AQRV (such as visibility) that has been identified for a Federal Class I area by an FLM and for which information is available to the general public. If your emissions unit has already been permitted under minor NSR or another SIP-approved permitting program, you may have already satisfied the second part of this test. If not, consistent with the requirements in sections 165(a)(3) and 173(a) of the CAA, you will be required to show that the allowable emissions will not cause or contribute to a NAAQS or PSD increment violation, or adversely impact an AQRV (such as visibility) that has been identified for a Federal Class I area by an FLM and for which information is available to the general public. For areas that do not already attain the NAAQS, the source would be required to show that the emissions for the unit have been previously offset.

4. Can an Emissions Unit That Applies No Emissions Control Technology Qualify as a Clean Unit?

In most cases, BACT/LAER will result in significant emissions decreases (such as 90 percent control for many VOC coating sources). [1] In some circumstances, however, the outcome of a reviewing authority's BACT or LAER determination may result in an emission limitation that you will meet without using a control technology (add-on control, pollution prevention technique, or work practice). Under the rule, you will not qualify as a Clean Unit in such circumstances. More specifically, the rule also requires you to make an investment to qualify initially as

a Clean Unit. An investment includes any cost that would ordinarily qualify as a capital expense under the Internal Revenue Service's filing guidelines whether or not you actually choose to capitalize that cost. An investment also includes any cost you incur to change your emissions unit or process to implement a pollution prevention approach, including research expenses, or costs to retool or reformulate your emissions unit or process to accommodate an add-on control, pollution prevention approach, or work practice.

[1] It is possible that a BACT/LAER analysis will not always result in the requirement of add-on controls at a source. In some situations, a reviewing authority may appropriately determine that the control technology that best represents BACT/LAER is a work practice, or a combination of work practices and add-on controls. As a result, a requirement to use work practices, or a combination of add-on controls and work practices, as an emissions control technology, could qualify an emissions unit for Clean Unit status, provided it meets the criteria established.

5. When Do the Major NSR Requirements Apply to Clean Units?

For emissions units that are not Clean Units, a major modification occurs if both of the following result from the modification: (1) A significant emissions increase following the physical or operational change; and (2) a significant net emissions increase from the major stationary source.

Once an emissions unit qualifies as a Clean Unit, it is subject to an alternative major NSR applicability test for calculating emissions increases for subsequent changes. The major NSR applicability test for Clean Units is a different process.

For Clean Units, you must first determine whether a project causes the need to change the emission limitations or work practice requirements in the permit which were established in conjunction with BACT, LAER, or Clean Unit determinations and any physical or operational characteristics that formed the basis for the BACT, LAER, or Clean Unit determination for a particular unit.

- If it does, you lose Clean Unit status, and the project is subject to the applicability requirements as if the emissions unit were never a Clean Unit.
- If the project does not cause the need to change the emission limitations or work practice requirements in the permit which were established in conjunction with BACT, LAER, or Clean Unit determinations and any physical or operational characteristics that formed the basis for the BACT, LAER, or Clean Unit determination for a particular unit, then you maintain Clean Unit status, and no emissions increase is deemed to occur from the project for the purposes of major NSR.

Once you have lost Clean Unit status, you can only re-qualify for Clean Unit status by going through the process described in section 9.

6. Can You Get Clean Unit Status for Controls That Have Already Been Installed?

As discussed in section 3, emissions units that have been through major NSR permitting automatically qualify for Clean Unit status. This includes those emissions units that went through major NSR before promulgation of the rule. If an emissions unit automatically qualifies for Clean Unit status because it went through major NSR, its Clean Unit status is based on the BACT/LAER controls that went into service as a result of the major NSR review.

That is, Clean Unit status is based on the BACT/LAER controls regardless of whether the actual process for designating Clean Unit status through Title V occurs at some time after the controls went into service. However, Clean Unit status, and the ability to use the applicability process for Clean Units, does not begin until the Clean Unit effective date.

The specific procedures for when Clean Unit status starts, when it ends, and how it is designated are discussed in sections 7 through 9.

For emissions units that have not been through major NSR, the rule allows your reviewing authority to provide you with Clean Unit status for emissions control that you have already installed and operated.

However, the rule also limits the time frame under which your reviewing authority is allowed to make such determinations for Clean Unit status that is granted through a SIP-approved permitting process other than major NSR.

- Your reviewing authority will only be able to grant Clean Unit status for previously installed emissions controls if they were installed before the effective date of the program in your area.
- If the emissions unit's control technology is installed on or after the date that provisions for the Clean Unit applicability test are effective in your area, you must apply for Clean Unit status from your reviewing authority at the time the control technology is installed.
- As for emissions units that went through major NSR review, Clean Unit status for emissions units permitted through SIP-approved programs other than major NSR does not begin until the Clean Unit effective date.

If you are applying for retroactive Clean Unit status, the rule allows your reviewing authority to compare your emissions control level to the BACT or LAER level that would have applied at the time you began construction of your emissions unit. However, in some cases, such a comparability analysis may be difficult for you to demonstrate because of lack of sufficient information from

which your reviewing authority can make a reasoned determination. If this is the case, then you will have to demonstrate that your emissions controls are comparable to a BACT or LAER limit from a subsequent or current date.

7. When Can I Begin To Use the Clean Unit Test?

The exact effective date depends on the circumstances of the individual emissions unit, as explained further below. As a general principle, however, the effective date for Clean Unit status can never be before the Clean Unit provision becomes effective in the relevant jurisdiction.

For emissions units that automatically qualify for their original Clean Unit status because they have been through major NSR review, and for units that re-qualify for Clean Unit status (see section 9) by going through major NSR review and implementing new control technology to meet current-day BACT/LAER, the effective date is the date the emissions unit's air pollution control technology is placed into service, or 3 years after the issuance date of the major NSR permit, whichever is earlier. However, the effective date can be no sooner than the date that provisions for the Clean Unit applicability test are approved by the Administrator for incorporation into the SIP and become effective for the State in which the unit is located.

ie. If the source had a major NSR permit and began operating before the Clean Unit provision becomes effective in the relevant jurisdiction, the effective date is the date the State or local agency begins authorizing Clean Unit status.

As noted earlier, if the emissions unit previously went through major NSR, it automatically qualifies as a Clean Unit. The original Clean Unit status would be based on the controls that were installed to meet major NSR. An additional investment at the time the original Clean Unit status becomes effective is not required.

For emissions units that re-qualify for Clean Unit status (see section 9) by going through major NSR using an existing control technology that continues to meet current-day BACT/LAER, the effective date is the date the new major NSR permit is issued.

If you obtain Clean Unit status from your State or local reviewing authority using a SIP-approved permitting process other than major NSR, the Clean Unit effective date is the later of the following dates:

- (1) The date that the State or local agency permit that designates the emissions unit as a Clean Unit is issued;
 - ie. If the controls went into service before the issuance date of the State or local agency permit that designates the unit as a Clean Unit, the Clean Unit effective date is the date that the permit is issued. As with units that have been through major NSR, additional

investment is not required for the limited cases where there is a retroactive designation.

and

(2) the date that the emissions unit's air pollution control measures went into service.

ie. If the issuance date of the State or local agency permit that designates the emissions unit as a Clean Unit is before the date the controls went into service (as would likely be the case for a unit that is new or modified after the State or local agency begins to authorize Clean Unit status), then the effective date of Clean Unit status is the date the controls went into service.

8. How Long Does Clean Unit Status Last?

In most cases, you may use the Clean Unit applicability test for a period of 10 years. As a general principle, the Clean Unit expiration date can never be later than the date that is 10 years after the controls are brought into service.

For emissions units that automatically qualify for their original Clean Unit status because they have been through major NSR review, and for units that re-qualify for Clean Unit status (see section 9) by going through major NSR review and implementing new control technology to meet current-day BACT/LAER, Clean Unit status expires 10 years after the effective date, or the date the equipment went into service, whichever is earlier. However, Clean Unit status expires sooner if, at any time, the owner or operator fails to comply with the provisions for maintaining Clean Unit status that are included in the rule.

For emissions units that re-qualify for Clean Unit status (see section 9) by going through major NSR using an existing control technology that continues to meet current-day BACT/LAER, Clean Unit status expires 10 years after the effective date. However, as noted above, Clean Unit status expires sooner if, at any time, the owner or operator fails to comply with the provisions for maintaining Clean Unit status that are included in the rule.

The expiration date for Clean Units that have not been through major NSR permitting depends on whether the owner or operator qualifies for Clean Unit status based on current BACT/LAER, or on BACT/LAER at the time the control technology was installed.

- If the owner or operator of a previously installed unit demonstrates that the emission limitation achieved by the emissions unit's control technology is comparable to the BACT/LAER requirements that applied at the time the control technology was installed, then Clean Unit status expires 10 years from the date that the control technology was installed.

- For all other emissions units (that is, previously installed units that are demonstrated to be comparable to current BACT/LAER, new units, and units that re-qualify as Clean Units), Clean Unit status expires 10 years from the effective date of the Clean Unit status. In addition, for all emissions units, Clean Unit status expires any time the owner or operator fails to comply with the provisions for maintaining Clean Unit status that are included in the final rules.

When your Clean Unit status expires, you are subject to the major NSR applicability test as if your emissions unit is not a Clean Unit. The permitted emissions levels established for the Clean Unit do not expire.

9. Can I Re-qualify for Clean Unit Status?

You may re-qualify for Clean Unit status after it has expired or you have otherwise lost Clean Unit status, if you meet the conditions in the regulation. As stated before, EPA believes that once you have installed state-of-the-art emissions control, an additional major NSR review will generally not result in any additional emissions controls for a period of years after the original control technology determination is made. Also, the period for which any specific air pollution control technology (which includes pollution prevention or work practices) will continue to achieve the same level of control depends on many factors. As a practical matter, EPA has established a single time frame of 10 years for Clean Unit status, to provide simplicity.

To re-qualify for Clean Unit status, you would generally follow the same process that you used in first qualifying for Clean Unit status. However, EPA will not necessarily require you to meet an additional investment test to re-qualify for Clean Unit status for the same controls. There will be no requirement for an investment to re-qualify for Clean Unit status, unless the controls used to establish Clean Unit status are no longer BACT/LAER or comparable.

You may re-qualify for Clean Unit status either by going through major NSR or by going through the alternative Clean Unit Test that described in section 3:

- (1) The air pollution control technology (which includes pollution prevention or work practices) must be comparable to BACT or LAER; and
- (2) the allowable emissions will not cause or contribute to a NAAQS or PSD increment violation, or adversely impact an AQRV (such as visibility) that has been identified for a Federal Class I area by an FLM and for which information is available to the general public.

Regardless of which process you used to establish Clean Unit status initially, you may choose to re-qualify for Clean Unit status by going through major NSR or by going through the alternative two-part test.

Once you have submitted an application to re-qualify for Clean Unit status, the reviewing authority will make a determination concerning current BACT/LAER or comparable control technology.

For example, suppose you had Clean Unit status for an emissions unit for which the controls went into service June 1, 1996, the permit application for Clean Unit re-qualification was submitted December 1, 2004, and the Clean Unit status expires June 1, 2006. In cases where the controls you installed in 1996 are still BACT/LAER or comparable when the reviewing authority makes the determination following your application submittal in 2004, the emissions unit can re-qualify for Clean Unit status based on the controls installed in 1996 if your emissions unit still meets all of the criteria for Clean Unit status. That is, in addition to the control technology review, the emissions unit must go through an air quality review and public participation.

For Clean Unit controls to re-qualify for Clean Unit status when the emissions unit is located in a nonattainment area, the control determination must be LAER or comparable to LAER. If you previously received Clean Unit status based on the BACT level of control while the source was located in an attainment area and the attainment area becomes a nonattainment area by the time your Clean Unit status expires, the Clean Unit status for re-qualification must be based on controls that are LAER or comparable to LAER.

The air quality analysis for Clean Unit re-qualifications will be that of the path that you have chosen- either major NSR, or comparable. Discussed in detail in section 3, for emissions units qualifying for Clean Unit status through the comparable test, you must show that the allowable emissions will not cause or contribute to a National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) increment violation, or adversely impact an AQRV (such as visibility) that has been identified for a Federal Class I area by an FLM and for which information is available to the general public.

EPA believes that the control technology determination, air quality review, and public participation requirements of the Clean Unit re-qualification process will ensure that Clean Units will continue to protect air quality throughout the 10-year re-qualification period. Moreover, any offset or mitigation requirements as a result of a previous major NSR determination will remain in force.

- EPA expects in many cases that the controls used to initially establish Clean Unit status will still be operating efficiently and the Clean Unit status can be reestablished for an additional 10 years based on those controls.
- Suppose, however, you submitted an application to re-qualify for Clean Unit status and the reviewing authority determines that your existing controls do not meet the level of current BACT/LAER or comparable

controls. In this case, you must install new or upgraded controls to re-qualify for Clean Unit status. You must go through the control technology determination, air quality review, and public participation requirements of the Clean Unit re-qualification process as described above.

10. What Terms and Conditions Must the Permit for my Clean Unit Contain?

Major NSR permits contain the emission limitations based on BACT/ LAER, other permit terms and conditions that the reviewing authority identifies as representative of BACT/LAER (such as limits on hours of operation), and monitoring, recordkeeping and reporting requirements for the emissions unit. If you are qualifying for Clean Unit status through the major NSR review, your major NSR permit will have such terms and conditions.

Likewise, any permit under a SIP-approved permitting process other than major NSR that designates an emissions unit as a Clean Unit must specify:

- (1) The source-specific allowable permit emission limitations, the exceedance of which, in combination with a significant net emissions increase, will trigger major NSR review;
- (2) other permit terms and conditions that the reviewing authority identifies as representative or comparable to BACT/LAER for your control technology (such as limits on operating parameters, etc.);
- (3) any conditions used as the basis for the control technology determinations (hours of operation, limits on raw materials, etc.); and
- (4) the monitoring, recordkeeping, and reporting requirements necessary to demonstrate that a “clean” level of emissions control is being achieved. Additional monitoring, recordkeeping, and reporting may be required to assure compliance under Sec. 70.6(a)(3) or 70.6(c)(1) (to assure compliance under Title V).

The State and local agency permits establishing Clean Unit status must contain a statement designating the emissions unit as a Clean Unit. The State or local agency permit must also include general terms and conditions indicating the Clean Unit effective date and expiration date.

ie. Suppose the State or local agency permit has an effective date of May 5, 2006, and the controls will be installed after this date. The SIP permit would state that the effective date of the Clean Unit status is the date the controls go into service. The permit would also state that Clean Unit status will expire no later than May 5, 2016.

Your Title V permit must include:

- the Clean Unit status;
- the effective and expiration dates of the Clean Unit status;

- the emission limitation(s) that reflect BACT/LAER or comparable control; other permit terms and conditions that the reviewing authority has determined represent BACT/LAER or comparable control (such as limits on hours of operation) and that ensure that air quality is protected;
- and the monitoring, recordkeeping, and reporting requirements necessary to demonstrate that a "clean" level of emissions control is being achieved.

11. How Will my Clean Unit Status be Incorporated Into my Title V Permit?

Clean Unit status and other permit terms and conditions must be incorporated into the major stationary source's Title V permit in accordance with the provisions of the applicable Title V permit program under part 70 or part 71, but no later than when the Title V permit is renewed.

The Title V permit must also contain the specific dates on which your Clean Unit status is effective and on which it expires.

But EPA is aware that the specific Clean Unit effective and expiration dates will frequently not be determined at the time that Clean Unit status is established. Therefore, the initial Title V permit action that incorporates Clean Unit status and other permit terms and conditions may need to state the Clean Unit effective and expiration dates in general terms.

ie. For units that have been through major NSR, the initial Title V permit might state that the expiration date is the earlier of the following dates: the date 10 years after (1) the Clean Unit's effective date, or (2) the date the equipment went into service.

The permit does not have to include the specific Clean Unit effective and expiration dates where they cannot be determined at the time of initial incorporation, such as would be the case when the Clean Unit has yet to be constructed.

Furthermore, in these instances, EPA is not requiring that the Title V permit be modified to incorporate the specific Clean Unit effective and expiration dates until the next permit renewal, reopening, or modification after such dates are known.

As soon as the specific Clean Unit effective and expiration dates are known, the source must report them to the reviewing authority. The specific Clean Unit effective and expiration dates must then be incorporated into the Title V permit at the first opportunity, such as a modification, revision, reopening, or renewal of the Title V permit for any reason, whichever comes first, but in no case later than the next renewal. However, it is not necessary to amend the SIP- approved permit to incorporate the specific Clean Unit effective and expiration dates, as long as these dates are incorporated into the Title V permit at the next renewal. If you

wish to incorporate the Clean Unit effective and expiration dates into the SIP permit, a Title V modification would be required.

While the Title V permit contains the Clean Unit permit terms and conditions, EPA wants to emphasize that any changes to Clean Unit permit terms and conditions (other than incorporating the specific Clean Unit effective and expiration dates) must first be made through a SIP- approved permitting process that provides for public review and opportunity for comment. Any such changes would be incorporated into the Title V permit in the manner described above.

12. Can a Clean Unit Be Used in a Netting Analysis?

Generally, for an emissions unit that has Clean Unit status because it has gone through major NSR permitting, you must not include emissions changes at the Clean Unit in a netting analysis, or use them for generating offsets, unless the emissions changes occur and you use them for these purposes before the effective date of Clean Unit status or after Clean Unit status expires. However, if you reduce emissions from the Clean Unit below the level that qualified the unit as a Clean Unit, you may generate a credit for the difference between the level that qualified the unit as a Clean Unit and the new emission limitation, if such reductions are surplus, quantifiable, permanent, and federally enforceable (for the purposes of generating offsets) and enforceable as a practical matter (for purposes of determining creditable net emissions increases and decreases). Such credits may be used for netting or as offsets.

EPA is allowing the credit to be computed in this manner because the owner or operator has already obtained an actual emissions-based offset for the emissions up to the Clean Unit emission limitations. By the owner/operator's accepting a federally enforceable emission limitation below this level, these offsets are now available to create additional actual emissions reductions.

The rule is similar for emissions units that are designated as Clean Units in a SIP-approved permitting process other than major NSR. You must not include emissions changes that occur at such units in a netting analysis, or use them for generating offsets, unless the emissions changes occur and you use them for these purposes before the effective date of the SIP requirements adopted to implement the Clean Units or after Clean Unit status expires. However, if you reduce emissions from the Clean Unit below the level that qualified the unit as a Clean Unit, you may generate a credit for the difference between the level that qualified the unit as a Clean Unit and the new emission limitation, if such reductions are surplus, quantifiable, permanent, and federally enforceable (for purposes of generating offsets) and enforceable as a practical matter (for purposes of determining creditable net emissions increases and decreases). Such credits may be used for netting or as offsets.

13. How Does Clean Unit Status Apply When There Are Multiple Pollutants?

- Clean Unit status is pollutant-specific and may not be granted for more than one pollutant, except in cases where a group of pollutants is characterized as a single pollutant, such as VOCs.
- You may, however, qualify for simultaneous Clean Unit status for other pollutants at those emissions units that are sufficiently controlled to independently qualify as ``clean" for each pollutant.
- For units applying for Clean Unit status and that do not already have a major NSR permit, the reviewing authority must specify the pollutants for which Clean Unit status applies as part of the permitting process establishing Clean Unit status.

Attachment 3

**Detailed Description:
New Source Review Reform: Plantwide Applicability Limits (PALs)**

Prepared by:
**Subcommittee on NSR Reform
State Advisory Board on Air Pollution**

**Prepared for Submission to the Virginia
State Air Pollution Control Board**

October 14, 2003

PLANTWIDE APPLICABILITY LIMITS (PALs)

A plantwide applicability limit (PAL) is a voluntary option that allows a major stationary source to manage facility-wide emissions without triggering major new source review (NSR). EPA's new PAL program is based on plantwide actual emissions. If the emissions from a facility are maintained below a plantwide actual emissions cap (an "actuals PAL"), then the facility may avoid major NSR permitting process when it makes alterations to the facility or individual emissions units. In return for this flexibility, the facility must monitor emissions from all emissions units under the PAL, including recordkeeping, monitoring, and reporting.

The regulatory provisions for actuals PALs are found in the major NSR rules for nonattainment areas at § 51.165(f), and in the PSD regulations at §§ 51.166(w) and 52.21(aa).

The PAL option provides a voluntary alternative for determining NSR applicability. Actuals PALs are rolling 12-month emissions caps (that is, tpy limits) that include all conditions necessary to make the limitation enforceable as a practical matter. PALs are allowed on a pollutant-specific basis. Sources may also opt for actuals PALs for more than one pollutant. Major NSR applicability provisions continue to apply at a facility to air pollutants which have no PAL.

The following describes the specific requirements for actuals PALs.

1. Permit Application Requirements, Process Used To Establish a PAL, and Public Participation Requirements

A source that wishes to obtain a PAL must submit a complete application to their department. The application, at a minimum, must include:

- a list of all emissions units and their size (major, significant, or small);
- federal and state applicable requirements, emission limitations and work practice requirements that each emissions unit is subject to; and
- the baseline actual emissions for the emissions units at the source (with supporting documentation). The calculation of baseline actual emissions must include fugitive emissions to the extent they can be quantified.

Based on this application, the department will establish a PAL in a federally enforceable permit—for example, a "minor" NSR construction permit, a major NSR permit, or the operating permit program.

After issuing a PAL permit, the department must then provide an opportunity for public participation consistent with the requirements of § 51.161, including a

minimum of a 30-day period for public notice and opportunity for comment. Where the PAL is established in a major NSR permit, major NSR public participation procedures apply. When establishing a PAL, the source must comply with all applicable requirements of the department's minor NSR program, including modeling, to ensure protection of the ambient air quality. Additionally, the source must meet all applicable title V operating permit requirements. When adding new emissions units under a PAL, the source must comply with the department's minor NSR permit requirements for public notice, review, and comment. In contrast, when adding new emissions units that will require an increase in a PAL, the source must comply with the department's major NSR permit requirements for public notice, review, and comment.

2. How the PAL Level is Determined

The PAL level for a specific pollutant is calculated by:

- summing the baseline actual emissions of the PAL pollutant for each emissions unit, then
- adding an amount equal to the applicable significant level for the PAL pollutant under § 52.21(b)(23) or under the Clean Air Act, whichever is lower.

The source must first identify all existing emissions units (greater than 2 years of operating history) and new emissions units (less than 2 years of operating history since construction). When establishing the actuals PAL level, the source must calculate the baseline actual emissions from existing emissions units that existed during the 24-month period as described below. The baseline actual emissions will equal the average rate, in tpy, at which the emissions units emitted the PAL pollutant during a consecutive 24-month period, within the 10-year period immediately preceding the application for a PAL.

Sources have broad discretion in selecting the consecutive 24-month period in the last 10 years to determine the baseline actual emissions. Only one consecutive 24-month period may be used to determine the baseline actual emissions for such existing emissions units. For any emissions unit (currently classified as existing or new) that is constructed after the 24-month period, emissions equal to its PTE must be added to the PAL level. Additionally, for any emissions unit that is permanently shut down or dismantled¹ since the 24-month period, its emissions must be subtracted from the PAL level.

¹ The key determination to be made is whether an emissions unit is "permanently shut down." EPA explains in its reactivation policy that whether or not a shutdown should be treated as permanent depends on the intention of the owner at the time of shutdown based on all facts and circumstances. Shutdowns of more than 2 years, or that have resulted in the removal of the source from the state's emissions inventory, are presumed to be permanent. In such cases it is up to the owner to rebut the presumption.

Different rules apply for determining baseline actual emissions for EUSGUs. The definition of baseline actual emissions should be referred to while determining the specific method for calculating baseline actual emissions. The baseline actual emissions for an emissions unit cannot exceed the emission limitation allowed by the permit or newly applicable state or federal rules (RACT, NSPS, etc.) in effect at the time the department sets the PAL. This means that for the purpose of setting the PAL, baseline actual emissions for an emissions unit will include an adjustment downward to reflect currently applicable requirements. Additionally, the department will specify a reduced PAL level (in tpy) in the PAL permit to become effective on the future compliance date(s) of any applicable federal or state regulatory requirements that the department is aware of prior to issuance of the PAL permit.

3. Length of PAL Effectiveness and What Happens When a PAL Expires

The term of an actual PAL is 10 years. At least 6 months prior to, but not earlier than 18 months from, the expiration date of a PAL, the source must submit a complete application either to request renewal or expiration of the PAL. If this application deadline for renewal is met, the existing PAL will continue as an enforceable requirement until the department renews the PAL, even if the department fails to issue a PAL renewal within the specified period of time.

As part of an application to request expiration of the PAL, the source must submit a proposed approach for allocating the PAL among its existing emissions units. The department retains the ultimate discretion to decide whether and how the allowable emission limitations will be allocated, including whether to establish limits on individual emissions units or groups of emissions units. As under the PAL, emissions units must comply with their allowable emission limitations on a 12-month rolling basis. However, the department retains its discretion to accept monitoring systems other than CEMS, CPMS, PEMS (and so forth) to demonstrate compliance with these unit-specific limits.

Until the department issues the revised permit with allowable emission limitations covering each emissions unit, the source must comply with a source-wide multi-unit emissions cap equivalent to the PAL level. After a PAL expires, physical or operational changes will no longer be evaluated under the PAL applicability provisions.

Notwithstanding the expiration of a PAL, the source must continue to comply with any state or federal applicable requirements for a specific emissions unit, such as BACT, RACT, or NSPS. When the PAL expires, none of the limits established pursuant to §§ 51.166(r)(2), 51.165(a)(5)(ii), or 52.21(r)(4), which the PAL originally eliminated, would return.

4. Termination of a PAL Before the End of Its Effective Period

EPA's rules do not contain specific provisions related to terminating a PAL. Decisions about whether a PAL can or should be terminated are handled between sources and the department in accordance with the requirements of the applicable permitting program.

5. PAL Renewal

As previously discussed, a source must submit a complete application to renew a PAL at least 6 months prior to, but not earlier than 18 months from, the expiration date of a PAL. If a complete application to renew the PAL is submitted by this deadline, the existing PAL will continue as an enforceable requirement until the department issues the permit with the renewed PAL. As part of the renewal application, the source must recalculate and propose its maximum PAL level, taking into account newly applicable requirements and the factors described below.

The department will review the complete application and issue a proposed permit for public comment consistent with the permitting procedures for issuing the initial PAL. As part of this public process, the department will provide a written rationale for its proposed PAL level. If the source's PTE has declined below the PAL level, the department will adjust the PAL downward so that it does not exceed the source's PTE.

In addition, the department may renew the PAL at the same level without consideration of other factors, if the sum of the baseline actual emissions for all emissions units at the source (as calculated using the definition of "baseline actual emissions") plus an amount equal to the significant level is equal to or greater than 80 percent of the PAL level (unless greater than the current PTE of the major stationary source). However, if the baseline actual emissions plus an amount equal to the significant level is less than 80 percent of the PAL level, the department may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, cost effective emissions control alternatives, or other factors as specifically identified by the department in its written rationale. For instance, the department may determine that PAL levels are inconsistent with the levels necessary to achieve the NAAQS, or the Commonwealth may determine that PAL levels need to be reduced to provide room for new economic growth.

In some cases, the department may exercise its discretion in deciding that an adjustment is not warranted. If a source would ordinarily be subject to a downward adjustment, but the department believes such an adjustment is not

appropriate, the source may propose another level. The department may approve the level that the source proposes if it determines, in writing, that the level is reasonably representative of the source's baseline actual emissions. Similarly, the department may determine that a lower level best represents the baseline actual emissions from the source.

Consistent with the effective period for the initial PAL, all renewed PALs are effective for 10 years.

6. Increasing a PAL During the Effective Period

The department may allow an increase in a PAL during the effective period if the source is adding new emissions units or changing existing emissions units in a way that would cause an exceedance of its PAL. However, EPA's rule only authorizes the department to allow such an increase if the source would not be able to maintain emissions below the PAL level, even if it assumed application of BACT equivalent controls on all existing major and significant units. Such units must be adjusted for current BACT levels of control unless they are currently subject to a BACT or LAER requirement that has been determined within the preceding 10 years, in which case the assumed control level must be equal to the emissions unit's existing BACT or LAER control level. The PAL permit must require that the increased PAL level will be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

Proposed new emissions unit(s) and existing emissions units undergoing a change must go through major NSR permitting, regardless of the magnitude of the proposed emissions increase that would result (for example, no significant level applies). This is because the significant level for the pollutant is incorporated into the PAL. These emissions units must comply with any emissions requirements resulting from the major NSR process (such as LAER), even though they have also become subject to the PAL program or remain subject to the PAL.

To request a PAL increase, the source must submit a complete major NSR permit application. As part of this application, the source must demonstrate that the sum of the following exceeds the PAL:

- baseline actual emissions of its small emissions units.
- baseline actual emissions from its significant and major emissions units.
- allowable emissions of the new or modified existing emissions unit(s).

After the department has completed the major NSR process, and determined the allowable emissions for the new or modified emissions unit(s), the department will calculate the new PAL as the sum of the allowable emissions of the new or

modified emissions unit(s), plus the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions from significant and major emissions units adjusted for the appropriate BACT level of control as described above. The department will modify the PAL permit to reflect the increased PAL level pursuant to the public notice requirements of §§ 51.166(w)(5), 51.165(f)(5), or 52.21(aa)(5).

7. Circumstances That Would Cause a PAL To Be Adjusted During the PAL Effective Period

During the term of the PAL, at PAL renewal or at title V permit renewal, the department may reopen a PAL permit and adjust the PAL level, either upward or downward. Certain activities require mandatory reopening; the department may reopen certain others at its discretion.

The department *must* reopen the permit:

- to correct typographical or calculation errors made in setting the PAL or to reflect a more accurate determination of emissions used to establish the PAL;
- to reduce the PAL if the source owner creates creditable emissions reductions for use as offsets; or
- to revise a PAL to reflect an increase in the PAL.

The department *may* reopen the permit to:

- reduce the PAL to reflect newly applicable federal requirements (for example, NSPS) with compliance dates after the PAL effective date;
- reduce the PAL consistent with any other requirement that is enforceable as a practical matter, and that the state may impose on the major stationary source under the SIP; or
- reduce the PAL if the department determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an AQRV that has been identified for a Federal Class I area by an FLM and for which information is available to the general public.

While the department is not required to immediately reopen the PAL permit to reflect newly applicable federal or state regulatory requirements that become effective during the PAL effective period, EPA does require the PAL to be adjusted at the time of the source's title V permit renewal or PAL permit renewal, whichever occurs first. Notwithstanding this requirement, the department has the discretion to reopen the PAL permit to reduce the PAL to reflect newly applicable federal or state regulatory requirements before EPA otherwise requires.

8. Elimination of Existing Emission Limitations

An actuals PAL may eliminate enforceable permit limits a source may have previously taken to avoid the applicability of major NSR to new or modified emissions units. Under the major NSR regulations at §§ 52.21(r)(4), 51.166(r)(2), and 51.165(a)(5)(ii), if a source relaxes these limits, the units become subject to major NSR as if construction had not yet commenced on the source or modification. Should a PAL be requested, the PAL may eliminate annual emissions or operational limits that were previously taken at the stationary source to avoid major NSR for the PAL pollutant. This means that the source may relax or remove these limits without triggering major NSR when the PAL becomes effective. Before removing the limits, the department should make sure that the source meets all other regulatory requirements and that the removal of the limits does not adversely impact the NAAQS or PSD increments.

EPA has not taken a position on whether compliance with requirements contained in a PAL permit could demonstrate compliance with certain pre-existing requirements on individual units. The department may assess, on a case-by-case basis, whether any streamlining would be appropriate in the title V permit consistent with part 70 procedures, and with EPA's existing policies and guidance on permit streamlining.

9. Monitoring Requirements the Permit Must Contain for Emissions Units Under a PAL

Each permit must contain enforceable requirements that accurately determine plantwide emissions. A PAL monitoring system must be comprised of one or more of the four general approaches that meet the minimum requirements discussed below, and must be approved by the department. The source may also employ an alternative approach if approved by the department. Use of monitoring systems that do not meet the minimum requirements approved by the department renders the PAL invalid. Any monitoring system authorized for use in the PAL permit must be based on sound science and must conform to generally acceptable scientific procedures for data quality and manipulation.

In return for the increased operational flexibility of a PAL, the permit must include sufficient data collection requirements to ensure compliance with the PAL at all times. In addition, the PAL permit must contain enforceable provisions that ensure that the monitoring data meet the minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.

This section addresses a number of issues associated with the practical enforceability of PALs and describes concepts to be followed when establishing PALs.

a. *How Monitoring Requirements for Emissions Units Under a PAL Differ From Those That are Not Under a PAL*

Typically, when an emission limitation applies on a unit-by-unit basis, the monitoring must be sufficient to provide data that demonstrate that emissions do not exceed the applicable limit for a particular unit. Under this approach, if an emissions unit has to meet an NSPS VOC limit of 9 ppm, the monitoring need only demonstrate that VOC emissions are no higher than 9 ppm but not measure VOC emissions at any precise level below 9 ppm (such as 7 or 8 ppm).

In contrast, under a VOC emissions actual PAL, the VOC emissions from each emissions unit must be quantified (in tpy), generally each month as the sum of the previous 12 months of VOC emissions. Thus, monitoring that quantifies the emissions from each emissions unit is needed to ensure that the annual limit is enforceable as a practical matter. As a result, the monitoring requirements for emissions units under a PAL may be more stringent than for those emissions units that are not. In many instances, emissions units may have monitoring suitable for determining compliance with a unit-specific emission limitation on a periodic basis, in accordance with title V requirements, but monitoring frequency of data collection may not be appropriate for ongoing emissions quantification for a 12-month rolling total. Thus, even if an emissions unit's monitoring meets the title V requirements in §§ 70.6(a)(3)(i)(B) or 70.6(c)(1), monitoring must be upgraded if the source requests a PAL and the existing monitoring does not meet minimum PAL requirements.

All units operating under a PAL must have sufficient monitoring to accurately determine plantwide emissions for a 12-month rolling total.

EXAMPLE: A source with five units must be able, at any time, to quantify the baseline actual emissions for the past 12 months for each of the five units. That source should, in advance, outline how it plans to monitor each of the units in order to quantify the emissions. If one of the five units cannot accommodate one of the monitoring options provided in the rule in order to quantify the emissions, then the source would be incapable of demonstrating ongoing compliance with the source's PAL.

b. *Testing Requirements*

As part of a PAL application and as directed by the department, the source must use current emissions or other current direct measurement data to demonstrate that its monitoring systems accurately determine emissions from each unit subject to a PAL. The source needs to collect such data from all units subject to the PAL, including those that are currently unregulated. If there is no current emissions data, or if the emissions unit's operation and equipment have changed since collection of that data, the source needs to obtain current, accurate data--

typically, by conducting performance tests or other direct measurements--before submission of the complete permit application to obtain a PAL.

In addition, the source needs to re-validate the data and any correlation to demonstrate that its monitoring systems continue to accurately determine emissions from each unit subject to a PAL. This re-validation must occur at least once every 5 years for the life of the PAL. Data must be re-validated through a performance evaluation test or other scientifically valid means that is approved by the department.

The source must conduct all testing in accordance with test methods appropriate to the emissions unit and applicable requirements, such as the test methods found in 40 CFR part 60, appendix A. During testing, the emissions unit must operate within the range under which it will operate, so as to provide an accurate quantification of emissions across the entire range. This may require more than one performance test.

c. Monitoring Systems

The PAL monitoring system must consist of one or more of the following general approaches:

- mass balance for processes, work practices, or emissions sources using coatings or solvents;
- Continuous Emissions Monitoring System (CEMS);
- Continuous Parameter Monitoring System (CPMS) or Predictive Emissions Monitoring System (PEMS) with Continuous Emissions Rate Monitoring System (CERMS) or automated data acquisition and handling system (ADHS), as needed; or
- emission factors.

Alternatively, another monitoring approach may be used if approved in advance by the department. The above monitoring approaches must meet minimum requirements established by the federal rule.

In the **mass balance approach**, the source would consider all of the PAL pollutant contained in or created by any raw material or fuel used in or at the emissions unit to be emitted. Currently, EPA limits this approach to monitoring for processes, work practices, or emissions sources using coatings or solvents. In order to use the mass balance approach, the source must validate the content of the PAL pollutant that is contained in or created by any raw material or fuel used on site. This validation may be accomplished by a regular testing program conducted by the vendor of the materials or by an independent laboratory. In addition, the source is required to use the upper limit of any content range in the calculations, unless the department determines that there is a site-specific data monitoring system in place at the unit or that there are data to support the use of another content within the range.

If the department allows the mass balance approach, then the PAL permit must require an accounting of all material containing the PAL pollutant or use of all materials that could create PAL pollutant emissions (through chemical decomposition, by-product formation, etc.).

EXAMPLE: A source is subject to a VOC PAL, and the emissions units does not use add-on control devices. A mass balance approach could be used to determine compliance: 8 tons of solvent with 25 percent VOCs used over one month would require reporting and including 2 tons of VOC emissions ($8 \times 0.25 = 2$) for that month to compare with the PAL. These emissions would count even if some of the VOCs were never emitted (because they were retained in the emissions unit's product, or in a process waste, or for some other reason).

A **CEMS**, coupled with a CERMS as well as an ADHS (collectively known as a CEMS), may be used to measure and verify the PAL pollutant concentration, volumetric gas flow (if applicable), and PAL pollutant mass emissions discharged to the atmosphere from each emissions unit emitting the PAL pollutant. If the source utilizes a CEMS approach, it must ensure that the CEMS meets the applicable Performance Specifications in 40 CFR part 60, appendix B. The CEMS must be capable of data sampling at least once every 15 minutes. In addition, the source must be able to convert the data obtained from the CEMS system to a mass emissions rate.

These types of monitoring systems are appropriate for emissions sources subject to SO₂, NO_x, CO, PM, VOC, TRS, or H₂S regulations.

A CPMS or PEMS coupled with CERMS and ADHS (collectively known as **parameter monitoring**), may be used for emissions units as reviewed and approved by the department.

To determine emissions, parameter monitoring relies on:

- use of physical principles;
- parameters such as temperature, mass flow, or pressure differential; and
- performance testing results.

Users of parameter monitoring must show a correlation between predicted and actual emissions across the anticipated operating range of the unit.

EXAMPLE 1: An incinerator determines VOC emissions by multiplying the incinerator efficiency by the amount of VOC-containing material used. Three assumptions are built into the emissions algorithm:

- (1) the VOC content remains constant;
- (2) the control device reduction efficiency remains constant over the temperature range established during performance testing; and
- (3) the unit load remains constant.

Checks on these assumptions are established by:

- ongoing monitoring requirements (combustion chamber temperature and control device load);
- ongoing emissions testing requirements (periodic re-evaluation of the correlation between combustion chamber temperature and control device efficiency); and
- ongoing testing of the VOC content of the material.

EXAMPLE 2: An organic emissions condenser would base the parameter monitoring design on:

- the laws of physics and the physical properties of the material (the lowest condensation temperature of the VOC constituent),
- the temperature of the condenser, and
- the maximum material feed rate.

Some parameter monitoring works by calculating emissions using data from monitored parameters and a neural network system to optimize performance of a unit. By measuring numerous parameters, the network can then automatically analyze current operations, as well as emissions, and make adjustments to optimize performance.

Establishing parameter monitoring is resource-intensive, requiring extensive up-front testing, analysis, and development. EPA has developed draft performance specifications for evaluating appropriate parameter monitoring accuracy, repeatability, and reproducibility which sources and the department should review in developing an interim protocol for using parameter monitoring to demonstrate continuous compliance with a PAL. An approved protocol may require revision as EPA finalizes performance specifications.

Monitoring systems, including parameter re-certification emissions testing, must be revalidated at least once every 5 years during the PAL permit term. Revalidation may be conducted as part of any other testing required by other non-PAL program requirements, such as title V.

If the source chooses a parameter monitoring approach, current site-specific data must be used to establish the emissions correlations between the monitored parameter and the PAL pollutant emissions across the entire range of the operation of the emissions unit. If the source cannot establish a correlation for the entire operation range, the department will, at the time of the permit issuance, establish a default value(s) for determining compliance with the PAL based on

the highest potential emissions reasonably estimated during the operational times when an emissions correlation is not available.

Alternatively, the department may decide that operation of the emissions unit during periods where there is no emissions correlation is a violation of the PAL. The PAL permit must include enforceable requirements if either of these alternatives to the required correlation for parameter monitoring are used.

Emission factors may be used for demonstrating compliance with PALs, as long as the factors are adjusted for the degree of uncertainty or limitations in the factors' development. In deciding whether an emission factor is appropriate, the source and the department should consider the contribution of emissions from the emissions unit in relation to the PAL, the size of the emissions unit, and the margin of compliance of the emissions unit. In addition, if the emission factor approach is taken, the emissions unit must operate within the designated range of use for the emission factor.

A significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions must conduct validation testing using other monitoring approaches (if technically practicable) to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the department determines that testing is not required. For example, if a source can satisfactorily demonstrate to the department that use of a particular emission factor would be protective of the environment, then the source may not need to conduct site-specific performance testing. An emissions unit is considered significant if the emissions unit has the potential to emit the PAL pollutant in amounts greater than those listed in § 51.165(a)(1)(x).

In the event a source chooses to use one or more emission factors for its significant or small emissions units, the source must prove to the department that the emission factors are appropriate and adjusted for any uncertainty in the factors' development.

The department may approve other types of monitoring systems that quantify emissions to demonstrate compliance with PALs. Other types of monitoring that may be approved include a gas chromatographic or a Fourier Transform Infrared Spectroscopy (FTIR) CEMS that relies on extractive techniques, coupled with a CERMS as well as an ADHS, to measure and verify the VOC concentration, volumetric gas flow, and VOC mass emissions discharged from stacks. For processes, work practices, or emissions sources subject to VOC or organic hazardous air pollutant regulations, these types of monitoring systems may be used for each emissions unit emitting VOC.

d. Monitoring system information

A monitoring system must be proposed as part of a PAL permit application. The monitoring system proposed must accurately determine plantwide emissions. The permit application must include a description of how data from each emissions unit subject to a PAL permit will be collected and transformed, in order that the emissions from each unit can be quantified as a 12-month rolling total. In addition, the permit application must demonstrate data accuracy, including a description of how the source will install, operate, certify, test, calibrate, and maintain the performance of its monitoring system(s) on each emissions unit that will be subject to the PAL.

Calculations also must be provided for the maximum potential emissions without considering enforceable emission limitations or operational restrictions for each unit in order to determine emissions during periods when the monitoring system is not in operation or fails to provide data. In lieu of the permit requiring maximum potential emissions during periods when there is no monitoring data, an alternate monitoring approach may be proposed as a backup. This backup monitoring must still meet the minimum requirements for the monitoring approaches prescribed in the regulation.

Note that each monitoring system with applicable requirements contained in appendix B of 40 CFR part 60 must be installed, operated, and maintained according to the applicable Performance Specification of 40 CFR part 60, appendix B.

For purposes of determining emissions from an emissions unit, a unit is considered operational not only during periods of normal operation, but also during periods of startup, shutdown, maintenance, and malfunction, even if compliance with a non-PAL emission limitation is excused during these latter periods. The department may approve different monitoring for various operating conditions (such as startup, shutdown, low load, or high load conditions as demonstrated through multiple performance tests) for each emissions unit. However, one of the accepted monitoring approaches (including alternative monitoring approved by the department) must be used for these periods, or the emissions during these periods must be calculated by assuming the highest PTE without considering enforceable emission limitations or operational restrictions.

In addition, the department may use the reasonably estimated highest potential emissions for periods when an emissions unit operates outside the parameter range(s) established in the performance test (unless another method is specified in the permit), and include those emissions in the 12-month rolling total in order to demonstrate compliance with the PAL. Alternatively, the department may decide that operation outside the range(s) established in the performance test violates the PAL. The department must decide how to handle emissions when the unit is operating outside the ranges established in the performance tests prior

to the issuance of the PAL permit, and must include appropriate enforceable conditions in the PAL permit.

In order to be approved by the department, a proposed monitoring system must measure the operational parameter value(s) within the established site-specific range(s) of operating parameter values demonstrated in recent performance testing. The monitoring system must then record the associated PAL pollutant mass emissions rate for that period based on the correlations demonstrated with the current test data.

e. Recordkeeping Requirements

The permit must require the source to maintain records of monitoring and testing data that support any compliance certifications, reports, or other compliance demonstrations. This information should contain, but is not limited to the following:

- The date, place (specific location), and time that testing or measuring occurs.
- The date(s) sample analysis or analyses occur.
- The entity that performs the analysis or analyses.
- The analytical techniques or methods used.
- The results of the analyses.
- Each emissions unit's operating conditions during the testing or monitoring.
- A summary of total monthly emissions for each emissions unit at the major stationary source for each calendar month.
- A copy of any report submitted to the department.
- A list of the allowable emissions and the date operation began for any new emissions units added to the major stationary source.

Additionally, all periods of deviation must be recorded, including the date and time that a deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction.

Records of all required testing and monitoring data, as well as supporting information, must be retained for at least 5 years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all required reports. Alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche may be allowed if they can be expeditiously inspected and reviewed, and do not conflict with other recordkeeping requirements.

Finally, the following records must be retained for the duration of the PAL effective period plus 5 years:

- a copy of the PAL permit application and any applications for revisions to the PAL; and
- each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.

f. Reporting requirements

Semi-annual monitoring and prompt deviation reports are required. The terms and conditions of an approved PAL become title V applicable requirements that will be placed in the title V permit. Therefore, the reports required under title V may meet the requirements of the PAL rule if the minimum reporting requirements listed in the regulations are met. A semi-annual emissions report must be submitted to the department within 30 days after the end of each reporting period. The department will use this report to determine compliance with the conditions of the PAL, including the PAL level.

The compliance period for an actuals PAL emissions level is a consecutive 12-month period, rolled monthly. Block 12-month periods (for example, January through December of each year) are not allowed. The emissions report must contain the following elements:

- include the total baseline actual emissions of the PAL pollutant for the previous 12 months.
- compare the previous 12 months' total emissions with the PAL level to determine compliance.
- identify:
 - the site and owner;
 - the applicable PAL;
 - monitored parameters, method of calculation with appropriate formulas, and any emission factors used, capture and control efficiencies used and the calculated emissions;
 - total monthly emissions (tons) and the equations used to compute this value for each of the 12 months before submission of the emissions report (or for all prior months if the PAL has not been effective for 1 year); and
 - total annual emissions (tpy).
- include a PAL compliance statement, a list of any emissions units added or modified to the site, and information concerning shutdown of any monitoring system, including the method that was used to measure emissions during that period.

Finally, in accordance with title V, all reports must be certified by a responsible official as true, accurate, and complete.

10. Process for incorporating conditions of the PAL into a title V operating permit

As discussed previously, the department establishes a PAL in a federally enforceable permit using its minor NSR permit process or the major NSR permit process, eventually rolling these requirements into the source's title V operating permit. The department's rules for establishing or renewing PALs must include a public participation process prior to permit approval of the PAL. The process must be consistent with the requirements at § 51.161 and include a minimum 30-day period for public notice and opportunity for public comment on the proposed permit. PALs established through the major NSR process are subject to major NSR public participation requirements. When adding a new emissions unit under an established PAL, the source must comply with the department's minor NSR permit requirements for public notice, review, and comment.

The process for incorporating the conditions of a PAL into the title V operating permit depends on whether the initial title V permit has already been issued for the source. If the initial title V permit has not been issued, a PAL created in a minor or major NSR permit would be incorporated during initial issuance of the title V permit. If the initial title V permit has already been issued, the PAL would be incorporated through the appropriate part 70 modification procedures. EPA recommends that sources request that the department renew the title V permit concurrently with issuance of the PAL.

Once a PAL is established, a change at a facility is exempt from major NSR and netting calculations, but could require a title V permit modification--as could any other change. Whether a title V permit modification would be required, and which permit modification process would be used, is governed by the current part 70 rule as implemented by the department.

EXAMPLE: The following example is based upon a hypothetical source that wishes to obtain an actuals PAL.

A manufacturing plant (a major stationary source) located in a serious ozone nonattainment area seeks an actuals PAL for VOC in January 2002. The major source threshold for VOC in a serious ozone nonattainment area is 50 tpy and the significant level for VOC modifications is 25 tpy. The plant has 5 emissions units with a total PTE of 640 tpy of VOC. Each emissions unit's **PTE for VOC** is as follows:

- Unit A - 335 tpy
- Unit B - 20 tpy
- Unit C - 125 tpy
- Unit D - 60 tpy
- Unit E - 100 tpy

Units A, B, C, and D are existing emissions units with more than 2 years of operating history. Unit E has been in operation for 1 year. Unit D was dismantled in 2000 and is considered permanently shutdown.

For Units A, B, C, and D, the source has selected July 1, 1996 to June 30, 1998 (a consecutive 24-month period) to determine baseline actual emissions. Unit A is subject to a RACT requirement that became effective in year 2000. The **baseline actual emissions** for each emissions unit during this period are as follows:

- Unit A - 140 tpy (including RACT adjustment)
- Unit B - 10 tpy
- Unit C - 90 tpy
- Unit D, 20 tpy

The actuals PAL level for VOC is $= 260 + 100 - 20 + 25 = 365$ tpy

WHERE:

- 260 tpy = the sum of the baseline actual emissions for emissions units A-D (with 2 or more years of operation);
- 100 tpy = the allowable emissions (PTE) of unit E, which was constructed after the 24-month period;
- 20 tpy = baseline actual emissions of unit D, which is permanently shut down since the 24-month period; and
- 25 tpy = significant level for VOC in a serious nonattainment area.